

## REMARKS

Claims 1-24 are pending.

The Examiner objected to the drawings for failing to include the reference numeral 40. Accordingly, a replacement sheet for Figure 6, clearly including the reference numeral 40, is submitted herewith.

The Examiner objected to Claims 1 and 4 for informalities. As amended, Applicant believes Claims 1 and 4 overcome the Examiner's objections. Specifically, Claim 1 now recites a method "for communicating data between a simulation of an electronic device and a network." With respect to Claim 4, the claim is now amended to recite "storing the data packets received from the simulation..."

The Examiner rejected Claims 1-4, 13-16 and 19-21 under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent 5,307,459 ("Petersen"). With respect to independent Claims 1, 19 and 21, the Examiner states:

4. As per claim 1, Petersen et al teach a method for connecting a simulation of an electronic device to a network comprising:
  - (a) receiving data packets from the network through a network interface (col. 6 lines 2327);
  - (b) storing the data packets received from the network in a first buffer in memory (col. 6, lines 29-32; and Fig. 5);
  - (c) transmitting the data packets received from the network to the simulation through a software interface (col. 6, lines 23-27. The transceiver used to transmit data needs software to perform the data transmission);
  - (d) receiving data packets from the simulation through the software interface (col. 6 lines 23-27. Again the receiver needs software to perform the task of receiving

data); and

(e) transmitting the data packets received from the simulation to the network through the network interface (col. 6 lines 23-27).

\* \* \*

12. As per claim 19, Petersen et al teach an apparatus for connecting an electronic device to a network comprising:

(a) a computer having a memory (col. 5, lines 58-59);

(b) a first buffer in the memory (col. 6, lines 29-32; and Fig. 5); and (c) computer instructions executable by the computer for:

receiving data packets from the network (col. 6 lines 23-27). The receiver needs instructions to perform the task of receiving data);

storing data packets received from the network in the first buffer (col. 6, lines 29-32; and Fig. 5);

transmitting the data packets received from the network to the electronic device under simulation (col. 6, lines 23-27);

receiving the data packets from the electronic device under simulation (col. 6 lines 23-27); and

transmitting the data packets received from the electronic device under simulation to the network (col. 6 lines 23-27).

\* \* \*

14. As per claim 21, it is different to claim 1 only that a computer readable medium having computer instructions to perform in a computer. The host system is a computer. It, of course needs instructions to perform tasks in this claim, and this host has memory EEPROM and RAM, which are computer readable medium to carry out these tasks. This claim is, therefore, rejected.

Applicant respectfully traverses the Examiner's rejection of Claims 1-4, 13-16 and 19-21. As amended, Claim 1 recites a method that communicates data between a

network and a simulation of an electronic device:

1. A method for communicating data between a simulation of an electronic device and a network operating at a speed higher than the electronic device as simulated, the method comprising:
  - (a) receiving data packets from the network through a network interface;
  - (b) storing the data packets received from the network in a first buffer in memory;
  - (c) transmitting the data packets received from the network to the simulation through a software interface;
  - (d) receiving data packets from the simulation through the software interface; and
  - (e) transmitting the data packets received from the simulation to the network through the network interface.

As explained in Applicant's Specification, at page 2, lines 18-24, for example, the present invention provides the advantage of allowing a logic circuit simulator running on a host processor to connect to a computer network at full network speed. As quoted above, in rejecting Claim 1, the Examiner relied on Petersen to teach "a method for connecting a simulation of an electronic device to a network," and in particular, the Examiner points to Petersen's col. 6, lines 23-27) as teaching a simulation of an electronic device. The Examiner is mistaken; the portion of Petersen on which the Examiner relied for his rejection does not disclose or suggest a simulation of an electronic device, but rather discloses a network adapter (Petersen, col. 6, lines 23-59). In particular, contrary to the Examiner's contention, Petersen's col. 6, lines 23-27 makes no reference to any simulation of an electronic device:

FIG. 2 is a functional block diagram of network adapter 3 with threshold logic 10 illustrating the various transfer paths. Network adapter 3 contains transceiver 12 which transmits and receives data frames across network 2.

In support of his position, the Examiner states that “the transceiver used to transmit data needs software to perform the data transmission.” The Examiner’s statement is unsupported by Petersen. If the Examiner disagrees, Applicant respectfully requests the Examiner to point out where Petersen discloses that the transceiver in its network adapter needs software to perform data transmission. Applicant therefore submits that Claim 1 and its dependent Claims 2-4 and 13-16 are each allowable over Petersen.

Independent Claims 19 and 21 also each recite a simulation of an electronic device:

19. (Original) An apparatus for connecting an electronic device to a network running at a speed higher than an electronic device under simulation, the apparatus comprising:

\* \* \*

(c) computer instructions executable by the computer for: receiving data packets from the network; storing data packets received from the network in the first buffer; transmitting the data packets received from the network to the electronic device under simulation at a slower speed; receiving the data packets from the electronic device under simulation; and transmitting the data packets received from the electronic device under simulation to the network at a higher speed.

21. (Original) A computer readable medium having computer instructions to perform in a computer:

\* \* \*

(c) transmitting the data packets received from the network to an electronic device under

simulation at a slower speed;

(d) receiving the data packets from the electronic device under simulation; and

(e) transmitting the data packets received from the electronic device under simulation to the network at a higher speed.

Thus, for the reasons already discussed above, Applicant submits that Claims 19 and its dependent Claim 20, and Claim 21 are each allowable over Petersen.

Reconsideration and allowance of Claims 1-4, 13-16 and 19-21 are therefore requested.

The Examiner rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Petersen and U.S. Patent 5,303,347 (“Gagne”). The Examiner states:

15. As per claim 5, Petersen et al do not teach changing the size of the first buffer at run time.

However, Gagne et al teach this feature (col. 5, lines 64-68).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Petersen et al and Gagne et al. Gagne et al's teaching of changing the size of the first buffer at run time would have helped users store different sizes of data important to the simulation of electronic devices.

Applicant respectfully traverses the Examiner's rejection of Claim 5. Claim 5 depends from Claim 1. Thus, the combined teachings of Petersen and Gagne, as discussed by the Examiner above, neither disclose nor suggest Applicant's Claim 5. Reconsideration and allowance of Claim 5 are therefore requested.

The Examiner rejected Claims 7-9 under 35 U.S.C. § 103(a) as unpatentable over Petersen, in view of U.S. Patent 5,761,486 (“Watanabe”). With respect to Claim 7, the

Examiner states:

16. As per claim 7, Petersen et al do not teach keeping a record of the data packets received from the network, the data packets transmitted to the simulation, the data packets received from the simulation; and the data packets transmitted to the network.

However, Watanabe et al teach these features (col. 6, lines 18-23).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Petersen et al and Watanabe et al.- Watanabe et al's teachings of keeping a record of the data packets received from the network, the data packets transmitted to the simulation, the data packets received from the simulation, and the data packets transmitted to the network would have provided designers information of the simulation in order to analyze and evaluate the simulation of electronic devices.

Applicant respectfully traverses the Examiner's rejection of Claims 7-9. As Claims 7-9 each depend from Claim 1, the combined teachings of Petersen and Watanabe, as discussed by the Examiner above, neither disclose nor suggest Applicant's Claim 7-9. Further, contrary to the Examiner's contention, Watanabe's col. 6, 18-23 does not disclose "keeping a record of the data packets received from the network, the data packets transmitted to the simulation, the data packets received from the simulation; and the data packets transmitted to the network":

A record format of each of records R0 to Rn indicative of the communication information of one packet in the file structure 21 includes: a transmitting source 72; a reception destination 74; a protocol identifier 76; a time 78; and communication data 80 constructed by a protocol header and data.

Accordingly, Claims 7 and its dependent Claims 8-9 are further distinguished over the combined teachings of Petersen and Watanabe. Reconsideration and allowance

of Claims 7-9 are therefore requested.

The Examiner rejected Claims 6 and 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Petersen, in view of the Lakshman article (“Lakshman”), which appeared in *IEEE/ACM Transactions on Networking*, vol. 5, No. 3, June 1997, pp. 336-350, citing Lakshman for teaching “discarding packets of when [a] buffer is full.”

Applicant respectfully traverses the Examiner’s rejection of Claim 6 and 22-24. As Claims 6 and 22-24 each depend respectively from Claims 1 and 21, the combined teachings of Petersen and Lakshman, as discussed by the Examiner, neither disclose nor suggest Applicant’s Claims 6 and 22-24. Reconsideration and allowance of Claims 6 and 22-24 are therefore requested.

The Examiner rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Petersen, in view of the Chu article (“Chu”), ACM 0-89791-089-3/83/0300-0170. The Examiner cites Chu for teaching recording the throughput of the data packets.

Applicant respectfully traverses the Examiner’s rejection of Claim 10. As Claim 10 depends from Claim 1, the combined teachings of Petersen and Chu, as discussed by the Examiner, neither disclose nor suggest Applicant’s Claim 10. Reconsideration and allowance of Claim 10 are therefore requested.

The Examiner rejected Claims 11-12 under 35 U.S.C. § 103(a) as being unpatentable over Petersen, in view of the U.S. Patent 6,757,367 (“Nicol”), citing Nicol for teaching modifying data packets.

Applicant respectfully traverses the Examiner’s rejection of Claims 11-12. As Claims 11-12 each depend from Claim 1 and 21, the combined teachings of Petersen and

Nicol, as discussed by the Examiner, neither disclose nor suggest Applicant's Claims 11-12. Reconsideration and allowance of Claims 11-12 are therefore requested.

The Examiner rejected Claims 17-18 under 35 U.S.C. § 103(a) as being unpatentable over Petersen, in view of U.S. Patent 6,850,510 ("Kubler"). With respect to Claim 17, the Examiner states:

26. As per claim 17, Petersen et al teach a method for testing a system for connecting an electronic device under simulation to a network, the method comprising:

- (a) generating a data packet in a first computer (col. 5, lines 55-59. The examiner interprets data transfer to and from host computer as data packet being generated in a computer different from the host computer);
- (b) transmitting the data packet, from the first computer, to a second computer (col. 5, lines 55-59);
- (c) transmitting back the data packet received by the second computer to the first computer (col. 5, lines 55-59);

However, Petersen et al do not teach

- (d) comparing the data packet received by the first computer with the data packet that was sent by the first computer; and
- (e) reporting an error if the data packet received by the first computer does not match the data packet that was sent by the first computer.

Kubler et al teach comparing data and reporting an error if there were mismatches (col. 80, lines 39-44).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Petersen et al and Kubler et al. Kubler et al's teachings of comparing data and reporting an error if there were mismatches would have helped designers detect problems with devices under simulation or communication issues between the 2 computers over the network.

Applicant respectfully traverses the Examiner's rejection of Claim 17. Claim 17

recites generating a data packet by software, and comparing the data packet with a copy of the same data packet that has traversed a computer network:

17 (Currently amended) A method for testing a system for connecting an electronic device under simulation to a network, wherein the simulation is to be carried out by software in a computer, the method comprising:

- (a) generating a data packet using software in a first computer;
- (b) transmitting the data packet, from the first computer, to a second computer;
- (c) transmitting back the data packet received by the second computer to the first computer;
- (d) comparing the data packet received by the first computer with the data packet that was sent by the first computer; and
- (e) reporting an error if the data packet received by the first computer does not match the data packet that was sent by the first computer.

As explained in Applicant's Specification, beginning at page 10, line 29 to page 11, line 13, the method provides a self-test to a system for simulating an electronic device that communicates with a network. As discussed above, Petersen does not disclose or suggest generating a data packet using software for transmission to a second computer. Further, contrary to the Examiner's contention, Kubler's col. 80, lines 39-44 does not disclose or suggest comparing a data packet with a returned copy of the same data packet that has traversed a computer network:

At a block 5403, the access server compares the extracted image with each of the main category images stored in the image database. If the closest comparison fails to fall within an accuracy threshold at a block 5405, the

access server indicates that the comparison has failed at a block 5407, and ends the process.

Thus, Applicant respectfully submits that the combined teachings of Petersen and Kubler, as discussed by the Examiner above, neither disclose nor suggest Applicant's Claim 17. Thus Claim 17 is believed allowable over the combined teachings of Petersen and Kubler. As Claim 18 recites similar limitations as those of Claim 17 discussed above, Claim 18 is also believed allowable over the combined teachings of Petersen and Kubler. Reconsideration and allowance of Claims 17-18 are therefore requested.

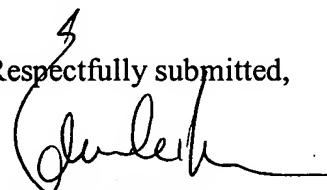
Accordingly, all pending claims (i.e., Claims 1-24) are believed allowable. If the Examiner has any questions regarding the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant at 408-392-9250.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 3, 2005.

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Date of Signature

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